



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,397	08/27/2003	Masahiro Fukuda	MAE 294	4592
23995	7590	03/08/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005				ROYER, WILLIAM J
		ART UNIT		PAPER NUMBER
		2852		

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/648,397	FUKUDA ET AL.
	Examiner	Art Unit
	William J. Royer	2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,11,12,21 and 22 is/are rejected.
- 7) Claim(s) 2-10 and 13-20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 August 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03032004; 03122004.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

Drawings

The drawings are objected to because of the following informalities:

In Figure 1, change reference numeral "1" to --- 116 ---.

In Figure 2, an arrowhead should be placed on the lead line extending from reference numerals "113" and "114".

In Figure 2, reference numeral "25" and a corresponding lead line should be inserted in order to identify the "drive roller" described in the specification.

In Figure 3, reference numeral "113" and a corresponding lead line, including an arrowhead as described above in reference to Figure 2, should be inserted in order to identify the "belt unit" described in the specification.

In Figure 3, an arrowhead should be placed on the lead line extending from reference numeral "114".

In Figure 4 and 5, reference numeral "114" and a corresponding lead line, including an arrowhead as described above in reference to Figure 2, should be inserted in order to identify the "sensor unit" described in the specification.

In Figure 6A, change --- CALIBRATION SHEET 17 --- to reference numeral --- 117 ---.

In Figure 6B, change --- BELT --- to reference numeral --- 116 ---.

In Figure 16, change reference numeral "115" to --- 105 ---.

In Figure 16, change reference numeral "116" to --- 106 ---.

In Figure 19, change reference numeral "334" to --- 334a ---.

In Figure 25, is "27b" correct or should "27b" be changed to --- 27d ---?

In Figure 26, change reference numeral "1" to --- 116 ---.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities:

In Figures 6A and 6B, reference numeral "4d" is shown, however, reference numeral "4d" does not appear to be identified in the specification.

In Figure 10, reference character "S5" is shown, however, reference character "S5" does not appear to be identified in the specification.

In Figure 17, reference numeral "204" is shown, however, reference numeral "204" does not appear to be identified in the specification.

In Figure 20, reference numeral "444" is shown, however, reference numeral "444" does not appear to be identified in the specification.

In Figure 21, reference numerals "432a", "432b" and "454" are shown, however, none of the noted reference numerals appear to be identified in the specification.

In Figure 22A, reference numeral "454" is shown, however, reference numeral "454" does not appear to be identified in the specification.

In Figure 23A, reference numeral "445" is shown, however, reference numeral "445" does not appear to be identified in the specification.

In Figures 24A and 24B, reference numeral "425" is shown, however, reference numeral "425" does not appear to be identified in the specification.

In Figure 28, reference numerals "532a" and "532b" are shown, however, neither reference numeral appears to be identified in the specification.

In Figures 30A and 30B, reference numerals "502" and "525" are shown, however, neither reference numeral appears to be identified in the specification.

In Figure 31, reference numerals "602", "608a", "616", "641a", "678", "679a", "679b", "680", "685-687", "689a", "689b", "691-693", "695", "697", "698" and "699a" are

Art Unit: 2852

shown, however, none of the noted reference numerals appear to be identified in the specification.

On page 1, line 4, change "of output" to --- of an output ---.

On page 1, line 20, change "belt, nothing" to --- belt with nothing ---.

On page 1, line 23, change "of color" to --- of the color ---.

On page 1, line 23, change "a density" to --- the density ---.

On page 1, line 27, change "output of" to --- output of the ---.

On page 4, line 6, delete --- is formed ---.

On page 4, line 32, before "image" insert --- toner ---.

On page 5, line 4, after "member" insert --- is ---.

On page 5, line 7, change "cleaningmember" to --- cleaning member ---.

On page 5, line 24, change "the fixing" to --- a fixing ---.

On page 5, line 27, change "the sensor unit and the belt" to --- a sensor unit and a belt ---.

On page 5, line 28, change "the transfer" to --- a transfer ---.

On page 5, line 31, change "the shutter" to --- a shutter ---.

On page 6, line 1, change "the density sensor 104 when the" to --- a density sensor when ---.

On page 6, line 3, change "the black" to --- black ---.

On page 6, line 14, change "of the" to --- of a ---.

On page 6, line 24, change "the blade" to --- a blade ---.

On page 6, line 28, change "the mechanism" to --- a mechanism ---.

- On page 6, line 29, change “the shutter” to --- a shutter ---.
- On page 6, line 34, change “between the” to --- between a ---.
- On page 7, line 1, change “the second” to --- a second ---.
- On page 7, line 6, change “the gear” to --- a gear ---.
- On page 7, line 7, delete --- the ---.
- On page 8, line 7, after “LED” insert --- head 22 ---.
- On page 8, lines 21 and 29, before “belt” insert --- transfer ---.
- On page 8, lines 28 and 30, delete --- belt ---.
- On page 9, line 15, change “478” to --- 418 ---.
- On page 9, line 30, before “roller” insert --- drive ---.
- On page 9, line 34, delete --- belt ---.
- On page 10, line 1, after “belt” insert --- 116 ---.
- On page 10, lines 4, 9, 11, 12 and 16, change “belt 116” to -- transfer belt 116 --.
- On page 10, line 7, after “104” insert --- (Fig. 2) ---.
- On page 10, lines 7 and 11, change “belt drive” to --- drive ---.
- On page 10, lines 21 and 22, after “unit” insert --- 16 ---.
- On page 11, line 1, after “shutter” insert --- 102 ---.
- On page 11, line 3, change “The” to --- A ---.
- On page 11, line 8, change “ a support” to --- the support ---.
- On page 11, line 8, change “a shutter” to --- the shutter ---.
- On page 11, line 20, change “9” to --- 109 ---.
- On page 12, line 2, change “the color” to --- color ---.

On page 12, line 13, change “the black” to --- black ---.

On page 12, line 19, change “the black” to --- a black ---.

On page 13, line 7, change “detects” to --- detect ---.

On page 13, line 8, after “sensor” insert --- 104 ---.

On page 14, line 8, after “controller” insert --- 118 ---.

On page 14, line 21, change “operates” to --- operated ---.

On page 14, line 25, change “belt” to --- transfer belt 116 ---.

On page 14, lines 28 and 30, after “sheet” insert --- 117 ---.

On page 15, line 2, after “sheet” insert --- 117 ---.

On page 15, line 8, after “sensor” insert --- 104 ---.

On page 15, line 23, change “belt” to --- transfer belt 116 ---.

On page 18, line 17, after “head” insert --- 22 ---.

On page 19, line 2, after “head” insert --- 22 ---.

On page 19, line 29, change “the blade” to --- a blade ---.

On page 19, line 30, change “the left” to --- a left ---.

On page 19, line 31, change “the right” to --- a right ---.

On page 19, line 32, change “121” to --- 221 ---.

On page 19, line 33, change “the support” to --- a support ---.

On page 20, lines 2, 3 and 8, change “The” to --- A ---.

On page 20, line 10, change “2228b” to --- 228b ---.

On page 20, line 14, change “202” to --- 228 ---.

On page 20, line 17, change “the toner” to --- toner ---.

On page 20, line 18, change “shit sensors” to --- shift sensors 225 and 226 ---.

On page 21, line 12, change “334” to --- 334a ---.

On page 21, line 23, reference numeral “302” is used to identify a shutter, however, reference numeral “302” does not appear to be shown in any of the figures.

On page 22, lines 3 and 27, delete --- belt ---.

On page 22, lines 8 and 19, change “support” to --- supporting ---.

On page 22, line 28, change “support the” to --- support a ---.

On page 23, lines 3 and 30, delete --- belt ---.

On page 23, line 9, before “shaft” insert --- short ---.

On page 23, lines 16 and 20, after “shutter” insert --- 405 ---.

On page 23, lines 25 and 28, before “belt” insert --- transfer ---.

On page 24, line 5, after “first gear” insert --- 461 ---.

On page 24, line 5, after “second gear” insert --- 462 ---.

On page 24, line 15, change “the solenoid” to --- a solenoid ---.

On page 24, lines 19, 20, 25 and 33, delete --- belt ---.

On page 25, lines 8, 13, 17 and 23, delete --- belt ---.

On page 26, lines 5, 22, 23 and 25, change “belt drive” to --- belt ---.

On page 26, line 9, reference numeral “420” is used to identify photoconductive drums, however, reference numeral “420” does not appear to be shown in any of the figures.

On page 26, line 15, after “roller” insert --- 16a ---.

On page 26, line 23, change “belt 116” to --- transfer belt 116 ---.

- On page 26, line 30, before "roller" insert --- drive ---.
- On page 27, lines 3, 5, 10 and 12, before "belt" insert --- transfer ---.
- On page 28, lines 4, 5, 7 and 24, before "belt" insert --- transfer ---.
- On page 28, line 13, after "performs" delete --- an ---.
- On page 28, line 16, delete --- belt ---.
- On page 29, line 16, change "an exit" to --- the stacker ---.
- On page 29, line 25, delete --- belt ---.
- On page 30, line 4, before "belt" insert --- transfer ---.
- On page 30, lines 19, 20 and 21, after "shutter" insert --- 508 ---.
- On page 30, line 19, after "mechanism" insert --- 31 ---.
- On page 30, line 20, change "a shutter" to --- the shutter ---.
- On page 30, lines 28 and 32, delete --- belt ---.
- On page 31, line 28, delete --- belt ---.
- On page 32, line 3, change "the guide" to --- guide ---.
- On page 32, line 33, change "the frame" to --- a frame ---.
- On page 33, line 5, change "a motor" to --- the motor ---.
- On page 33, line 27, before "gear" insert --- movable ---.
- On page 33, line 32, change "shaft" to --- gear ---.
- On page 34, lines 2 and 18, change "gear 594" to --- movable gear 594 ---.
- On page 34, line 4, change "96a" to --- 596a ---.
- On page 35, line 24, change "509a and 509b" to --- 579a and 579b ---.
- On page 36, line 5, change "shit" to --- shift ---.

On page 36, line 19, after "roller" insert --- 16a ---.

On page 37, line 4, change "the shutter" to --- a shutter ---.

On page 37, lines 12 and 17, before "belt" insert – transfer ---.

On page 37, line 13, change "the color" to --- color ---.

On page 37, line 15, after "sensors" insert --- 603a and 603b ---.

On page 37, line 31, change "the lever" to --- a lever ---.

On page 37, line 32, change "the stopper" to --- a stopper ---.

On page 37, line 33, after "lever" insert --- 699 ---.

On page 38, line 4, change "the movable" to --- a movable ---.

On page 38, line 5, change "the drive" to --- a drive ---.

On page 38, line 17, change "the density" to --- a density ---.

On page 38, line 24, after "art" insert --- are ---.

Appropriate correction is required.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology, i.e., said. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 1, 3, 11, 13 and 20-22 are objected to because of the following informalities:

Claim 1, line 7, before "image" insert --- toner ---.

Claim 3, line 7, before "image" insert --- toner ---.

Claim 11, lines 3 and 4, after "said" insert --- toner ---.

Claim 13, line 3, change "the reflection member" to --- a reflection member" since a "reflection member" has not been defined previously in Claim 13 nor in Claim 12.

Claim 20, line 2, after "member" insert --- is ---.

Claim 21, lines 3 and 4, after "said" insert --- toner ---.

Claim 22, line 7, before "image" insert --- toner ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11, 12 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hori et al. Referring to Figures 1, 3, 12A and 12B, Hori et al disclose an image forming apparatus in which a toner image is formed on a photoconductor drum 9 (i.e., toner image bearing body) by an image forming section and the toner image is transferred onto a recording medium and further disclose an embodiment for calibrating an output from a reflection type photosensor 20 (i.e., reading section). In Figure 12B, a

reference original 40 (i.e., covering section) having an image of a reference density is placed between the photosensor and a photoconductor drum with a surface 40a where an image is formed being opposed to the photosensor. The output from the photosensor is, after converted by an A/D converter 23 into digital data, received by a control circuit 22 (i.e., adjustment section). The received data is correlated to a toner image density value corresponding to a density of the image on the reference original, and data representing a correlation is stored in an output calibration table. The reference original is supported by a supporting bar 41 that is rotatably attached to a shaft 42 fixed within a copying machine body. The reference original is held by one end of the supporting bar, and an actuator 44 is fixed to the other end of the supporting bar. The actuator is driven by a solenoid 43 (i.e., drive mechanism), and is urged by a coil spring 45 toward a direction along an arrow 46. Further, it is noted that it is disclosed that once it is determined that transfer of a toner image is not conducted in adjusting a density, the density of the toner image on the photoconductor drum can be detected in any position.

Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (JP 2002-131997). Referring to Figures 1, 6, 8 and 9, Takahashi discloses an image forming apparatus in which a toner image is formed on an image bearing body and the toner image is transferred onto a recording medium, the apparatus including: image forming section PY, PM, PC, PBk; a toner image bearing body 30; a reading section

200 that reads the toner image formed on the toner image bearing body; a covering section 202 provided between the reading section and the toner image bearing body and movable between a closing position where the covering section covers the reading section and an opening position where the covering section does not cover the reading section; a drive mechanism 205 that drives the covering section to move between the opening position and the closing position; and a cleaning member 203 mounted to the covering section, wherein when the drive mechanism drives the covering section to move between the opening position and the closing position, the cleaning member moves into contact engagement with the reading section to remove foreign matter t from the reading section.

Allowable Subject Matter

Claims 2-10 and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relevant Prior Art

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagatomi et al disclose an apparatus that has a movable cover which opens an optical passage of an optical sensor when the apparatus is in operation and shuts off the optical passage when the apparatus is not in operation.

Art Unit: 2852

Tanaka discloses an apparatus that has a shutter plate movably provided between a detecting surface of a density sensor and a transfer surface of a transfer belt.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Royer whose telephone number is (571) 272-2140. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William J. Royer
Primary Examiner
Art Unit 2852

wjr
March 4, 2005